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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

May 20, 2003

Applicants : Kenneth S. MURPHY  
For : THERMAL BARRIER COATING  
Serial No. : 10/024 518  
Filed : Dec. 21, 2001

Group: 1775

Examiner: McNeil

Confirmation No. 2151

#8/A

KW

66003

Commissioner for Patents  
P.O. Box 1450  
Arlington, VA 22313-1450

RESPONSE TO OFFICE ACTION

Dear Sir:

Please amend the above application as follows:

IN THE SPECIFICATION

A) Amend page 3, sixth paragraph as follows:

A1  
Figure 3 is a graph of thermal conductivity versus temperature for various thermal barrier coatings including coatings pursuant to the invention designated 7Y46HfZrO and ~~20Y40HfZr~~ 20Y40HfZrO.

B) Amend page 3, eighth (partial) paragraph as follows:

A2  
The present invention can be used to protect known nickel based and cobalt based superalloy substrates which may comprise equiaxed, DS (directionally solidified) and SC (single crystal) investment castings as well as other forms of these superalloys, such as forgings, pressed superalloy powder components, machined components, and other forms. For example only, representative nickel base superalloys include, but are not limited to, the well known Rene' alloy N5, MarM247, CMSX-4, PWA 1422, PWA 1480, PWA 1484, Rene' 80, Rene' 142, and SC 180 used for making SC and columnar grain turbine blades and vanes. Cobalt based superalloys which can be protected by the thermal barrier coating system include, but are not limited to, FSX-414, X-40, and MarM509. The invention is not limited to nickel or cobalt based superalloys and can


The amended claims 1-19 are believed to overcome the Section 102 and Section 103 rejections of claims 1, 7, and 13-15 set forth on pages 3-5 of the office action as noted by the examiner on page 5 of the office action.

Applicant has added new claims 20-27, which are believed allowable also. The Commissioner is authorized to charge the fee for new claims 20-27 to my deposit account No. 20-1124.

Applicant requests allowance of pending claims 1-27.

Applicant encloses a Supplemental IDS listing documents which were cited by the British Patent Office with respect to a corresponding British application based on Applicant's above identified US application.

Respectfully submitted,



Edward J. Timmer Reg. No. 27,402

enclosure: IDS, Form 1449, document copies and Postal card

CERTIFICATE OF MAILING

I hereby certify that this correspondence and enclosures are being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents  
P.O. Box 1450, Arlington, VA 22313-1450, on May 27, 2003.



Edward J. Timmer